IN THE CLAIMS:

Please amend claims 21 and 22, and add new claims 27-33, as shown in the complete list of claims that is presented below.

Claims 1-20 (cancelled).

Claim 21 (currently amended): A method for manufacturing a semiconductor device, in which a first semiconductor chip or substrate and a second semiconductor chip are joined to each other face-to-face via first bumps provided on electrode terminals or wiring of said first semiconductor chip or substrate and second bumps provided on said second semiconductor chip, comprising the steps of:

providing at least one of said first or second bumps with a low-melting point metal layer having a lower melting point than that of each of said bumps;

superposing said first semiconductor chip or substrate and said second semiconductor chip without perfect alignment, such that one is on the other, and said first bumps ~~are facing each other~~ face corresponding second bumps;

heating up said first semiconductor chip or substrate and said second semiconductor ~~ship~~ chip to a temperature at which said low-melting point metal layer melts, to thereby self-align said ~~second~~ first semiconductor chip or substrate and said second chip and join them to each ~~other; and~~ other,

~~filling an insulating resin into a gap between said first semiconductor chip or substrate and said second semiconductor chip after they are joined.~~

wherein one of said first bumps and corresponding second bumps is smaller in diameter than the other, and said first and corresponding second bumps are joined by heating such that a fillet is formed and covers at least part of a side wall of the smaller of said first and corresponding second bumps.

Claim 22 (currently amended): The method ~~comprising the step of:~~ according to claim 21, wherein said heating up step comprises:

liquefying said low-melting point metal layer to thereby diffuse metals of said first and corresponding second bumps ~~provided on the surface of said electrode terminal or said~~

~~wiring~~ into the liquefied low-melting point metal, by the liquid-phase diffusion method, thus joining said first semiconductor chip or substrate and said second semiconductor chip to each other.

Claim 23 (previously presented): The method according to claim 22, wherein said bumps are made of Au and said low-melting point metal layer is made of an Au-Sn alloy or Sn.

Claims 24-26 (cancelled).

Claim 27 (new): The method according to claim 21, further comprising the step of:

filling an insulating resin into a gap between said first semiconductor chip or substrate and said second semiconductor chip after they are joined.

Claim 28 (new): The method according to claim 24, wherein said insulating resin and said first and second bumps have approximately the same elastic modulus.

Claim 29 (new): The method according to claim 21, wherein said first and corresponding second bumps have ends that are substantially flat and that are oriented toward one another in said superposing step, the end of the smaller of said first and corresponding second bumps being smaller in area than the end of the larger of said first and corresponding second bumps.

Claim 30 (new): A method for manufacturing a semiconductor device, in which a first semiconductor chip or substrate and a second semiconductor chip are joined to each other face-to-face via bumps provided on electrode terminals or wiring of the first semiconductor chip or substrate and bumps provided on the second semiconductor chip, the bumps provided on electrode terminals or wiring of the first semiconductor chip or substrate including a first bump with a substantially flat end and the bumps provided on the second semiconductor chip including a second bump having a substantially flat end, said method comprising the steps of:

providing at least one of the first and second bumps with a low-melting point layer made of a metal having a lower melting point than that of either of the first and second bumps;

superposing the first semiconductor chip or substrate and the second semiconductor chip without perfect alignment between the bumps thereof, the end of the first bump facing the end of the second bump;

heating the first semiconductor chip or substrate and the second semiconductor chip to a temperature at which the metal having a lower melting point melts, to thereby self-align the first semiconductor chip or substrate and the second chip and join them to each other,

wherein the end of one of the first and second bumps has an area smaller than the end of the other of the first and second bumps, and a fillet of the metal having a lower melting point forms during the heating step and covers at least part of a side wall of the first or second bump with the end having the smaller area.

Claim 31 (new): The method according to claim 30, wherein the heating step comprises:

liquefying the metal having a lower melting point to thereby diffuse metals of the first and second bumps into the metal having a lower melting point.

Claim 32 (new): The method according to claim 30, wherein the first and second bumps are made of Au and the metal having a lower melting point is an Au-Sn alloy or Sn.

Claim 33 (new): The method according to claim 30, further comprising the step of:

filling an insulating resin into a gap between the first semiconductor chip or substrate and the second semiconductor chip after they are joined.

Claim 34 (new): The method according to claim 33, wherein the insulating resin and the first and second bumps have approximately the same elastic modulus.